

Notice of Allowability

Application No.

10/727,671

Examiner

James D. Stein

Applicant(s)

KISHIDA ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 8/12/05.
2. ☒ The allowed claim(s) is/are 1,3-7,10-22 and 25-39.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


John D. Lee
Primary Examiner


James D. Stein
Patent Examiner, AU 2874

DETAILED ACTION

This Office Action is responsive to the amendment filed on 8/12/05, which has been fully considered and entered into the prosecution record. Claims 2, 8, 9, 23 and 24 are cancelled. Claims 1, 3, 10, 16, 19, 22 and 26 are amended. New claims 28-39 have been added. Therefore, claims 1, 3-7, 10-22 and 25-39 are pending in the application.

Allowable Subject Matter

Claims 1, 3-7, 10-22 and 25-39 are allowed.

The following is an examiner's statement of reasons for allowance:

With regard to claims 1, 3-7, 10-22, 25-27 and 38-39, as was discussed in the previous Office Action, none of the prior art of record discloses or suggests the variable optical attenuator device as discussed prior, further comprising the birefringent device, the liquid-crystal device, and the reflective device integrated together. Furthermore, it would not have been obvious to one of ordinary skill in the art to modify device disclosed by Hoyt et al. ("Hoyt") to include this feature because Hoyt discloses the devices as separate components. The examiner believes it would not be possible to integrate the birefringent device, the liquid-crystal device and the reflective device of Hoyt together. This design allows applicant to achieve a more compact module than that disclosed by Hoyt.

With regard to claims 28-30, as was discussed in the prior Office Action, none of the prior art or record discloses or suggests the optical attenuator device as discussed above, further comprising a prism unit which is interposed between said fiber array block and said lens array

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block and which reflects a portion of incident light in a direction crossing the direction of an optical axis; and a light-receiving unit for monitoring input and output light which receives the light reflected from said prism unit. In fact, Hoyt shows the prism unit to be at a terminal end of the device. The examiner believes it would not have been obvious or even possible to modify the Hoyt device such that the prism unit is interposed between the fiber array block and the lens array block without destroying its functionality.

With regard to claims 31-33, as was discussed in the prior Office Action, none of the prior art or record discloses or suggests the optical attenuator device as discussed above, wherein said reflection device is formed from a coupler film which permits transmission of a portion of the light exiting the liquid-crystal device; and an input light monitor light-receiving unit for receiving the light having passed through said coupler film is provided on the surface of said coupler film. In fact, the Hoyt reference discloses a prism that functions as a reflection device. Therefore, the examiner believes that it would not have been obvious or even possible to modify the Hoyt device in such a way without destroying its functionality. This design allows applicant to achieve a more compact module and a different output monitoring arrangement than Hoyt.

With regard to claims 34-37, as was discussed in the prior Office Action, none of the prior art or record discloses or suggests the optical attenuator device as discussed above, further comprising an output light monitor light-receiving unit for receiving the light that is not coupled to said output optical fiber as a result of a variation in the polarizing state of said liquid-crystal device from among the beams reflected from said reflection device. Although the Hoyt et al. reference incorporates a monitor 150, it utilizes a reference beam rather than the portion of light not coupled to the output fibers as a result of a variation in the polarizing state of the liquid

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crystal device from among the beams reflected from said reflection device. Therefore, it would not have been obvious to one of ordinary skill in the art to modify the VOA disclosed by Hoyt such that an output light monitor light-receiving unit for receiving the light that is not coupled to said output optical fiber as a result of a variation in the polarizing state of said liquid-crystal device from among the beams reflected from said reflection device.

For these reasons, the claimed invention is patentably distinct from the prior art. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

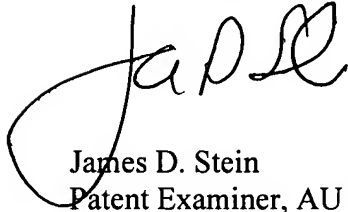
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

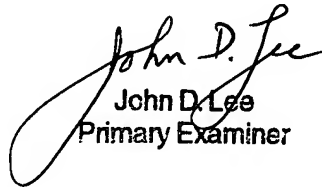
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein
Patent Examiner, AU 2874



John D. Lee
Primary Examiner